Total No. of printed pages = 7

END SEMESTER/RETEST EXAMINATION, J/F 2023

Semester : 1st (New)

Subject Code : Me-101

ENGINEERING DRAWING

Full Marks – 100

Time – Four hours

The figures in the margin indicate full marks for the questions.

Instruction :

- *All* questions of PART – A and PART – B are compulsory.

PART – A

Marks – 25

1. Fill in the blanks : 1×10=10

   (a) Uses of T-square, Set-squares, Scale and Protractor are combined in the _____.

   (b) Centre lines, Locus lines and Pitch circles are drawn as _____.

[Turn over

(c) Plane geometry has _____ dimensions and solid geometry has _____ dimensions.

(d) In _____ projection, the projectors are perpendicular to the plane of projection.

(e) When the line is parallel to both horizontal and vertical plane, we get its true length in _____ view.

(f) When the measurements are required in three units _____ scales are used.

(g) Isometric scale is used in _____ projection.

(h) A line of 1m is shown by 1cm on a scale. Its representative fraction is _____.

(i) In first angle projection method object is assumed to be placed in _____ quadrant.

(j) The internal angle of a regular pentagon is _____ degree.

2. Answer the following questions : 1×5=5

(a) Write one requirement of lettering.

(b) Draw the symbol of 3rd angle projection.

(c) What is a comparative scale ?

(d) When will the front view of a straight line show the true length of line ?

(e) Write two differences between 1st and 3rd angle projection.

3. Choose the correct answers : 1×5=5

(a) When a line is parallel to both H.P. and V.P. it has

(i) only H.T

(ii) only V.T

(iii) Both H.T. and V.T

(iv) No H.T. and V.T

(b) When both the views coincide with reference line, line is lying in ?

(i) H.P

(ii) V.P

(iii) Both H.P. and V.P

(iv) None of these

(c) Which of the following is a conic section ?

(i) Triangle (ii) Rectangle

(iii) Circle (iv) Square

(d) If a line AB is parallel to both the horizontal plane and vertical plane, then the line AB

(i) is parallel to profile plane

(ii) lies on profile plane

(iii) is perpendicular to profile plane

(iv) is inclined to profile plane

(e) The ratio of the length of drawing of the object to the actual length of the object is called

(i) Resulting fraction

(ii) Representative fraction

(iii) Representative figure

(iv) Resulting figure.

4. Write True or False : 1×5=5

(a) Designation of enlarging scale is 1 : X.

(b) Full form of BIS is "Bureau of Indian Standards".

(c) In a lap joint, the plate to be connected do not overlap each other.

(d) A straight line is the longest distance between two points.

(e) Drawing of buildings are drawn using enlarging scale.

PART – B

Marks – 75

5. Giving importance on the shape of letters, write the following in single stroke vertical style. Consider the height of letter is 20 mm : 10

"ENGINEERING DRAWINGS"

6. Draw any *four* of the following : 5×4=20

(a) Inscribe a regular pentagon in a circle of 50 mm dia.

(b) Construct a regular hexagon of side 40 mm.

(c) Describe an equilateral triangle about a circle of 40 mm dia.

(d) Construct a diagonal scale of RF = 1/4000 to show meters, and long enough to measure up to 800 meters.

(e) Draw a tangent to a circle of 50 mm dia from a point 60 mm away from its centre.

7. Draw the projection : 10

(a) A point M is 40 mm above H.P and 55 mm behind the V.P.

(b) A point N is 25 mm below H.P and 25 mm behind the V.P.

(c) A point C is 40 mm above the H.P and 30 mm in front of the V.P.

8. Draw any *two* of the following thread forms taking pitch 30 mm : 5×2=10

(a) Square thread

(b) Acme thread

(c) Knuckle thread.

9. (a) A line AB is 90 mm inclined at 30 to H.P and 45 to V.P. The point A is 30 mm above H.P and 40 mm in front of V.P. Draw the projection of the line. 10

Or

(b) Draw the following : 5×2=10

(i) Lap Joint

(ii) Double cover Butt joint.

10. Draw the orthographic view of an object with 1st angle projection. 15

(a) Front view

(b) Top View

(c) Side View.

